BIOSAFETY CABINET

NSF EN12469

yakos™

TRIED & TRUSTED

BIOSAFETY CABINET

www.yakos65.com

40 YEARS OF OPERATION

Yakos65, a registered brand of Chung Fu Technical Development Co., Ltd. was founded in 1976. Nearly 40 years of operation, Yakos65 has heavily relied on excellent R&D capabilities and strong manufacturing process. Yakos65 has developed a formidable range of high quality laboratory products and an accumulation of laboratory-built performance achievements; including laboratory planning and design, lab furniture, laboratory animal products, clean room, and zebra fish housing room.

CONTINUOUS TECHNOLOGY UPGRADES

Yakos65 meets international standards, regulations and industry criterias for quality policies, including an integrated product development procedure, procurement, manufacturing, assembly, inspection, packaging, sales and service. Each step of the process adheres to strict quality control to ensure total customer satisfaction, from start to finish. As a true testament of Yakos65's dedication to pioneering technological breakthroughs, it developed the first Asian flammable safety storage cabinet certified by FM Approvals and a biological safety cabinet certified by NSF.

PRODUCT PERFORMANCE AND SERVICE EXCELLENCE

Product performance and excellent service are Yakos65's core competencies. Having the right staff has always been the reason behind Yakos65's success. The R&D and manufacturing teams guarantee that each and every product passes the most stringent inspection before leaving the factory and is delivered to the customer on time.

TRIED & TRUSTED

It is important that each customer tries and experiences Yakos65's products so they can actually grasp the full benefits. As Yakos65's slogan goes; our products are "Tried & Trusted". In addition to continuously providing you with a safer and more reliable product, Yakos65 strives to strengthen policy commitments for a sustainable management system.

NSF Certified EN12469 Certified YY 0569 Certified

BIOSAFETY CABINET

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NSF Certified
EN12469 Certified
YY 0569 Certified
UL61010-1/CSA-C.22.2 No.61010-1 Certified
ISO 9001:2008 Quality Management System Certified

The Biosafety Cabinet is a safety device to protect the personnel, environment and product. It is the most commonly used containment device for work with biohazardous agents or materials. During operations, it helps avoid exposure to possible infectious aerosols and spills for the operation of experimental material of bio-hazardous, nature microbial strains or clinical diagnostic inspection sample. This Biosafety Cabinet is widely used in biological experiments; it is the most important barrier (Primary Barrier) and front line defense for the safety of the operator. Biological safety cabinets that are installed, certified, and used correctly offer user, environmental, and product protection from biohazards.

Class II type A2 Biosafety Cabinets currently dominate the market in popularity among all Biosafety Cabinets. They are designed to work with agents that require Biosafety Level 1 ~ 3 containment and minimize hazards. A2 Biosafety Cabinets maintain negative pressure environments inside the cabinet during operation to prevent the contaminants from escaping the work area to protect the employees. To protect the product, approximately 70% of the room air is pressurized by the blower and forced through the supply HEPA filter prior to entering the work area. Finally, the remaining 30% of air is filtered through an exhaust HEPA filter. The sterile air finally exits the cabinet and is released back into the environment.

Application areas: Hospitals, Universities, Research Centers, Pharmaceutical Companies and other Biological / Life Science Laboratories.

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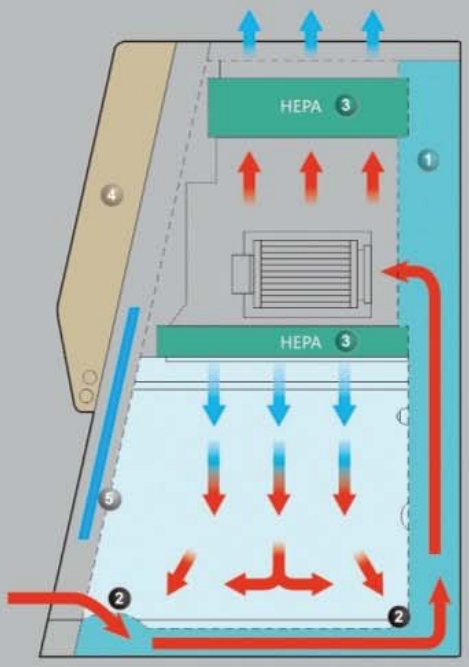
Each Biosafety Cabinet has been put through 8 performance tests, a UV lighting intensity test and 3 electrical safety tests before leaving the factory.



Sterile (clean) air

Contaminated (dirty) air

Multiple Protection Design Increases Security Level Significantly

DOUBLE-WALL CABINET STRUCTURES. CONTAMINATED AREA SURROUNDED WITH NEGATIVE PRESSURE TO FULLY PREVENT LEAKAGE OF CONTAMINATED AIR. 1

Supply/Exhaust HEPA filter 99.99% efficiency @0.3 micron (Class H14) 3

Control systems and pipelines completely isolated from contaminated areas for convenient and safe maintenance. 4

Innovative surrounded air intake grille design. All contaminated air in the work area is enclosed inside the cabinet. No safety dead end; the safety of personnel is never compromised. 2

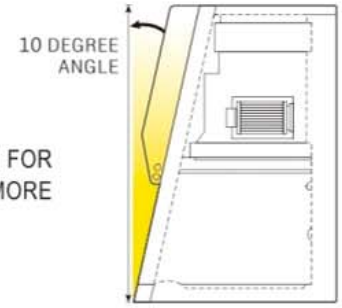
TEMPERED GLASS

6mm anti-ultraviolet tempered glass 5

Duplex electrical outlets with splash-proof cover. (UL listed) 6

Service valves for gas, air and vacuum. Maximum working pressure 75PSI. (CSA Certified) 7

User-Friendly Operation and Maintenance



UNIQUE WINDOW MECHANISM DESIGN. THE WINDOW CAN BE LOWERED DOWN FOR THE USER TO EASILY CLEAN THE INNER SURFACE OF THE GLASS. SAFER AND MORE CONVENIENT THAN OTHER CONVENTIONAL WINDOWS.

- Apply Key to switch power for operator security control.
- Ergonomic 10 degrees angle window design. Reduces operation discomfort over long-term use of limbs and eye strain.
- Work area and work tray are fabricated in one single-piece of stainless steel with rounded corners designed to reduce particulate adhesion and for easy cleaning and maintenance.
- Patented HEPA filter fixation design for a more secure locking device. Can replace HEPA filters rapidly from the front of cabinet quickly and easily.
- Pioneered single-piece stainless steel design of work tray with front grille. The front grille Arc increases the fluency of the inflow air. It can be used as an armrest and eliminates the need for additional armrest fittings.
- Removable single-piece work tray can be easily removed for cleaning and collection of spilled liquid.

▲ Arc-shaped armrest / grill

▲ Uplifting tray

ECM Brushless DC Motor With Excellent Energy Efficiency

SAFPLUS® AND SAFZONE® BIOSAFETY CABINETS WITH THE WORLD'S HIGHEST ECM RATING FOR BRUSHLESS DC MOTOR; MULTIPLE ENERGY - SAVING, STABILITY, HIGH EFFICIENCY AND LOW MAINTENANCE CHARACTERISTICS.

SAVE 86%

Power consumption saving by 86% against traditional PSC motors. (Internal test)

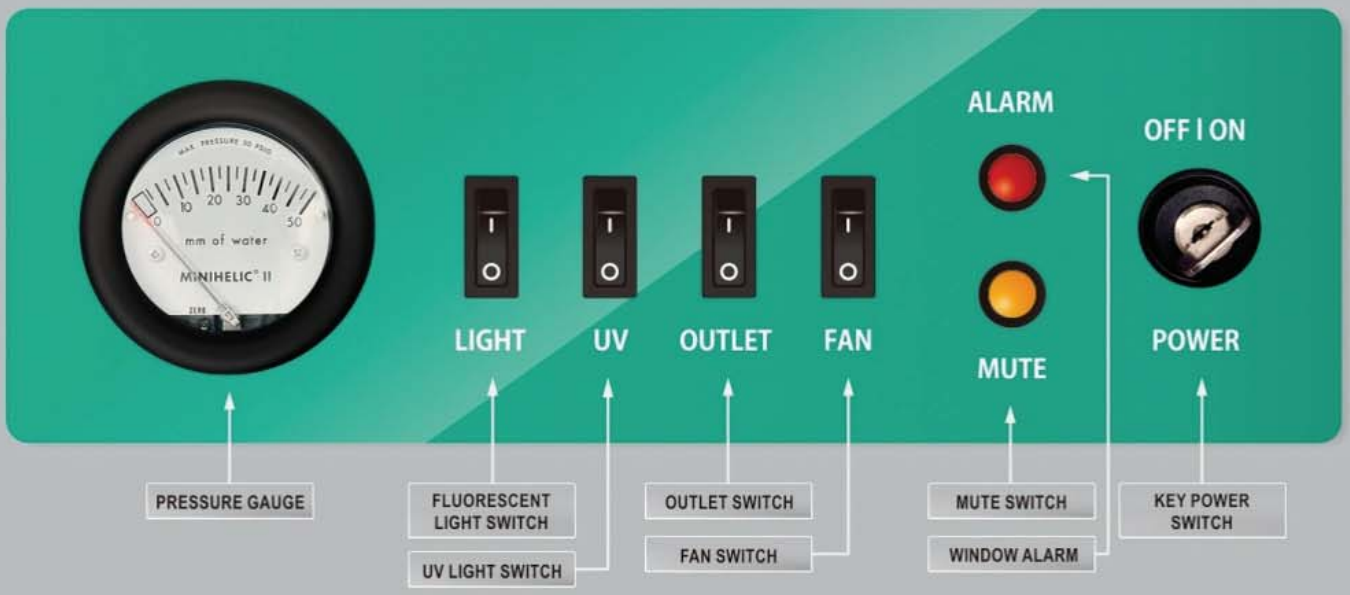
- Constant air flow design adjusts air pressure automatically providing stable air flow to extend the HEPA filter life.
- High torque design and superior efficiency. It can transport more air volume and pressure than traditional AC motors.
- More than 80% of the output power is converted into kinetic energy to achieve amazing energy-savings.
- Stable motor output which is not sensitive to external voltage surges can withstand 6KV surge circuit.
- Applied case design protects internal electronic components from dust pollution.
- Low operation temperature to extend the motor life.

Full-Color Microcomputer Touch Panel

GRAPHICAL USER INTERFACE DESIGN. EASY TO OPERATE. PROVIDES USER WITH A BETTER VIEW OF REAL-TIME OPERATION STATUS THROUGH THE SCREEN. IDEAL TO ACCESS VARIOUS FUNCTIONS AND PARAMETER SETTINGS.

▲ Real-time digital display of inflow velocity, downflow velocity, HEPA filter pressure, and usage time of HEPA filters and UV lamp.

AUTOMATIC PRE-PURGE	The pre-purge time can be set for the fan to run when the cabinet is warmed up. During pre-purge, the air is recycled in the cabinet to achieve uniform flow and steady state prior to performing operation.
AUTOMATIC POST-PURGE	The post-purge time can be set for removing the residual contaminated air in the cabinet to ensure the cleanliness of the work area after use.
TIMER	Built-in timer for counting up and down, electrical outlet, UV light.
ALARM	Audible and visual text alarms will be activated when the following situations occur. • Low inflow velocity • The window is not at the correct operation height. • High HEPA filter pressure. • Usage time of HEPA filter exceeds the setting hour. • Usage time of UV lamp exceeds the setting hour.
LOW FAN SPEED MODE	When the window is closed, the fan speed is automatically reduced to maintain work area cleanliness and energy-saving.
SAFETY INTERLOCK	Safety interlock for window and UV light to protect the operator from UV irradiation. When the window is opened, the UV light turns off automatically. UV light only activates when the window is fully closed.
OPERATION RECORD	Operation records can be viewed with a simple touch of the control panel.
UNIT DISPLAY	The unit display for air velocity and pressure can be set.
LANGUAGE DISPLAY	Multi-lingual display setting.
FAN CONTROL	Fan control setting allows the administrator to restrict the usage of cabinet by unauthorized personnel.
MUTE	When the audible alarm is activated, it can be muted temporarily by touching the mute switch. If the abnormal situation has not been settled, the cabinet alarm will be activated again within a set time to alert the user.



WINDOW ALARM When the window is not at the operation height of 20 cm, it will release an audible and visual alarm automatically.

MUTE SWITCH When the alarm is activated, it can be muted temporarily while the alarm light continues to flash. If the abnormal situation has not been settled, the cabinet alarm will be activated again within a set time (5 minutes) to alert the user.

SAFETY INTERLOCK When the window is opened, the fan and fluorescent light will be activated automatically and the uv light will be switched off. When the window is fully closed, the uv light will be re-activated automatically. The fan and fluorescent light will be switched off.

※ UV LIGHT TIMER for extra order.

Product Performance and Safety Testing before Leaving the Factory

- Pressure decay test
- Inflow velocity test
- Downflow velocity test
- HEPA filter leak test
- Airflow smoke patterns test
- Noise level test
- Lighting intensity test
- Vibration test
- UV lighting intensity test
- Electrical safety test

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Class II type A2 Biosafety Cabinet

NSF MET EN12469 CE

Detailed Specifications

Cabinet Type	4 feet	6 feet
International Certification	• NSF 49 • EN 12469 • China YY 0569(230V model) • UL61010-1/CSA-C.22.2 No.61010-1 • ISO 9001:2008	• EN 12469 • ISO 9001:2008
External Dimensions W×D×H (without support stand 640 mm)	1430×887×1650 mm	2030×779×1525 mm
Internal Dimensions W×D×H	1245×587×637 mm	1845×587×637 mm
Cabinet Main Construction	Stainless Steel#304	
Air Flow	70% recirculated/ 30% exhausted	
Window Operation Height	20 cm (8")	
Ave. Inflow Velocity	0.51 m/s	
Ave. Downflow Velocity	0.375 m/s	0.325 m/s
Exhaust Air Volume with Exhaust Canopy	16 m^3/min	23 m^3/min
Supply/Exhaust HEPA Filter	99.99% @0.3 micron (Class H14)	
Light Intensity	>800 lux	
Sound Level	< 65dBA	
UV Lamp	254 nm/ FL 30W×1	254 nm/ FL 20W×2
Fluorescent Lamp	T5/ 28W×2	T5/ 21W×4
Window Glass	6mm tempered glass	
Electrical Outlets	Duplex electrical outlets with splash-proof cover (UL listed)	
Optional Accessories	• IV bar with 6 hooks • Service valves(air, gas, vacuum), CSA Certified • Exhaust canopy	
Room Height Suggested	250 cm at least	
Power Consumption 115V,60Hz,10A	430 W	860 W
Power Consumption 230V,50Hz,7A	430 W	860 W
Net Weight, kg	350 kg	380 kg
Shipping Weight, kg	380 kg	420 kg
Shipping Dimensions W×D×H	1500×1050×1900 mm	2100x950x1800 mm

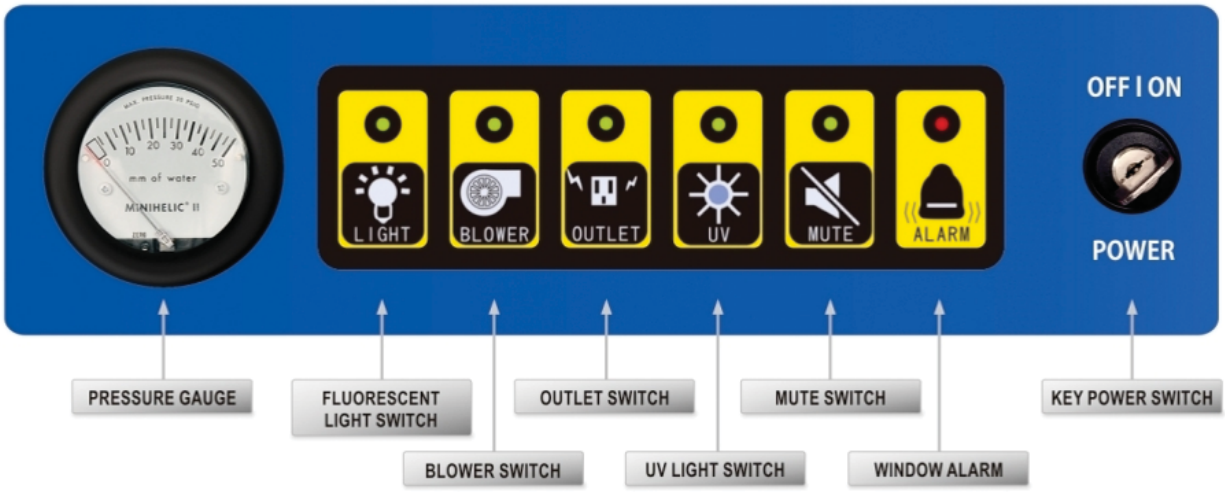
Ordering Guide - Model Number

Cabinet Type	4 feet	6 feet
Touch Panel /115V,60Hz,10A	AHA-143-AA-A	AHA-203-AA-A
Touch Panel /230V,50Hz,7A	AHA-143-AB-A	AHA-203-AB-A
Push Switch Panel /115V,60Hz,10A	AHA-143-BA-A	AHA-203-BA-A
Push Switch Panel /230V,50Hz,7A	AHA-143-BB-A	AHA-203-BB-A

SAFZONE® EN12469 CE

Class II A2 Biosafety Cabinet

- EN12469 Compliance Certified.
- Double-wall cabinet structures. Contaminated area surrounded with negative pressure.
- Innovative surrounded air intake grill design. All contaminated air in the work area gets enclosed inside the cabinet to prevent the leakage of contaminated air.
- The ECM brushless DC motor with Best Energy efficiency.
- Supply/Exhaust HEPA filter 99.99% efficiency @0.3 micron(Class H14).
- Unique window mechanism design. The window can be lowered down for the user to easily clean the inner surface of the glass safer and more convenient than other conventional window.
- Ergonomic 10 degree angle window design, reduces discomfort over long-term use of limbs and eye-strain.
- 6mm anti-ultraviolet tempered glass.
- 10 performance & safety tests before leaving the factory under strict quality control process.



WINDOW ALARM When the window is not at the operation height, it will release an audible and visual alarm automatically.

MUTE SWITCH When the alarm is activated, it can be muted temporarily while the alarm light continues to flash. If the abnormal situation has not been settled, the cabinet alarm will be activated again within a set time (5 minutes) to alert the user.

SAFETY INTERLOCK When the window is opened, the blower and fluorescent light will be activated automatically and the UV light will be switched off. When the window is fully closed, the UV light will be re-activated automatically. The blower and fluorescent light will be switched off.

UV LIGHT TIMER Built-in UV light timer for 0~99 minutes or hrs.

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Class II type A2 Biosafety Cabinet

EN12469 CE

Detailed Specifications

Cabinet Type		4 feet	5 feet	6 feet
International Certification		• EN 12469 • ISO 9001:2008		
External Dimensions W×D×H (without support stand 640 mm)		1334×789×1537 mm	1634×789×1537 mm	1934×789×1537 mm
Internal Dimensions W×D×H		1220×626×749 mm	1520×626×749 mm	1820×626×749 mm
Cabinet Main Construction		Stainless Steel#304		
Air Flow		70% recirculated/ 30% exhausted		
Window Operation Height		20 cm , 25 cm		
Ave. Inflow Velocity		0.51 m/s		
Ave. Downflow Velocity		0.325 m/s		
Exhaust Air Volume with Exhaust Canopy		16 m^3/min , 20 m^3/min	20 m^3/min , 25 m^3/min	24 m^3/min , 30 m^3/min
Supply/Exhaust HEPA Filter		99.99% @0.3 micron (Class H14)		
Light Intensity		>1,000 lux		
Sound Level		< 65dBA		
UV Lamp		254 nm/ FL 30W×1	254 nm/ FL 40W×1	254 nm/ FL 20W×2
Fluorescent Lamp		T5/ 28W×2	T5/ 35W×2	T5/ 21W×4
Window Glass		6mm tempered glass		
Electrical Outlets		Duplex electrical outlets with splash-proof cover (UL listed)		
Optional Accessories		• IV bar with 6 hooks • Service valves(air, gas, vacuum), CSA Certified • Exhaust canopy		
Room Height Suggested		227cm at least		
Power Consumption	115V,60Hz,10A	430 W	645 W	860 W
	230V,50Hz,7A	430 W	645 W	860 W
Net Weight, kg		269 kg	312 kg	355 kg
Shipping Weight, kg		299 kg	350 kg	400 kg
Shipping Dimensions W×D×H		1400×950×1800 mm	1700×950×1800 mm	2000×950×1800 mm

Ordering Guide - Model Number

Cabinet Type	4 feet	5 feet	6 feet	Window Operation Height
Touch Panel / 115V,60Hz,10A	AHA-133-AA-A	AHA-163-AA-A	AHA-193-AA-A	20 cm
	AHA-133-AA-B	AHA-163-AA-B	AHA-193-AA-B	25 cm
Touch Panel / 230V,50Hz,7A	AHA-133-AB-A	AHA-163-AB-A	AHA-193-AB-A	20 cm
	AHA-133-AB-B	AHA-163-AB-B	AHA-193-AB-B	25 cm
Membrane Switch Panel / 115V,60Hz,10A	AHA-133-CA-A	AHA-163-CA-A	AHA-193-CA-A	20 cm
	AHA-133-CA-B	AHA-163-CA-B	AHA-193-CA-B	25 cm
Membrane Switch Panel / 230V,50Hz,7A	AHA-133-CB-A	AHA-163-CB-A	AHA-193-CB-A	20 cm
	AHA-133-CB-B	AHA-163-CB-B	AHA-193-CB-B	25 cm

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Radiopharmacy Shielded Safety Cabinet

Application: Radiopharmaceutical preparing and operating.

- Comply with USP797 guideline.
- Air Flow: 70% recirculated/ 30% exhausted.
- Working Area Cleanliness: Class 100 (ISO 5).
- Cabinet Main Construction: Stainless steel #304 working area.
- Dual wall stainless steel #304 construction. Working area surrounded with negative pressure plenums for maximum safety.
- Lead shielding around the working area of 10 mm in sides, bottom and rear wall.
- 55 mm sliding lead glass window barrier in front of W515 x H313 mm.
- Ergonomic 10 degree angle window design, reduces discomfort over long-term use of limbs and eye-strain.

- Supply/Exhaust HEPA Filters: 99.99% efficiency for particle size at 0.3 micron(Class H14).
- Patent design for the fixation of HEPA filters.
- Removable single-piece work tray can be easily removed for cleaning.
- Safety Interlock: UV lamp interlocked with the window, fluorescent light and blower.
- Window Alarm: When the window is not at the operation height of 20 cm, it will release an audible and visual alarm automatically.
- Energy-saving ECM DC motor.

▲ Lead dose calibrator housing can be easily installed to protect the operator from potential radiation.

SAFPLUS® Radiopharmacy Shielded Safety Cabinet

EN12469 CE

Detailed Specifications

Cabinet Type		AHA-120 Series
Air Flow		70% recirculated/ 30% exhausted
Working Area Cleanliness		Class 100 (ISO 5)
External Dimensions W×D×H		1200×880×2290 mm
Internal Dimensions W×D×H		1010×587×630 mm
Cabinet Main Construction		SUS#304 stainless steel (Option: SUS#316)
Shielding Lead Sheet		10 mm(Option: 5 mm and 20 mm)
Shielding Lead Glass		55 mm
Window Operation Height		20 cm
Ave. Inflow Velocity		0.51 m/s
Ave. Laminar Downflow Velocity		0.32 m/s
Supply/Exhaust HEPA Filter		99.99% @0.3 micron (Class H14)
Sound Level		< 65dBA
UV Lamp		254 nm/ FL 30W
Fluorescent Lamp		T5/ 21W
Window Glass		6mm tempered glass
Electrical Outlets		Duplex electrical outlets with splash-proof cover (UL listed)
Optional Accessories		• IV bar with 6 hooks • Service valves(air, gas, vacuum), CSA Certified • Exhaust canopy
Room Height Suggested		250 cm at least
Power Consumption	115V,60Hz,10A	430 W
	230V,50Hz,7A	430 W
Net Weight, kg		900 kg
Shipping Weight, kg		950 kg
Shipping Dimensions W×D×H		1500×1050×1900 mm(for cabinet) , 1500×1050×700 mm(for support stand)

Ordering Guide - Model Number

Cabinet Type	AHA-120 Series
Touch Panel / 115V,60Hz,10A	AHA-120-AA-A
Touch Panel / 230V,50Hz,7A	AHA-120-AB-A
Push Switch Panel /115V,60Hz,10A	AHA-120-BA-A
Push Switch Panel /230V,50Hz,7A	AHA-120-BB-A
Membrane Switch Panel / 115V,60Hz,10A	AHA-120-CA-A
Membrane Switch Panel / 230V,50Hz,7A	AHA-120-CB-A

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Yakos65's responsibility is to provide customers with comprehensive solutions.
Please let us know what you are looking for so that we can process your inquiry as quickly and efficiently as possible.
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Biological Safety Cabinet I Flammable Safety Storage Cabinet I Zebra Fish Housing System I Lab Planning & Design I Lab Animal Room Planning & Design
Zebra Fish Room Planning & Design I Lab Furniture / Chemical Fume Hood I Lab Animal Housing Products

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